

IN THE CLAIMS:

Please amend Claims 1, 4, 7, 8, 11, 14, 15, 18, 21, 22, 26 and 30 and add new claims 31 to 42 as shown below. The claims, as pending in the subject application, now read as follows:

1. (Currently amended) A server apparatus adapted to communicate with at least one client, each client including an image storage unit for storing print data of a print job, and a printer via a network, comprising:

image storage means for storing the print data of the print job to be executed according to a print request from a client;

order management means for managing a print order of the print job to be executed according to the print request from the client;

transmission means for transmitting transmission permission information to the client based on the print order managed by said order management means, the transmission permission information indicating that the print data may be transmitted to said printer;

termination means for determining whether a message, which indicates that the printing process of the print data has finished, ~~an end command in response to the transmission permission information~~ is received from the client within a predetermined time in response to the transmission permission information; and

control means for transmitting the print data of the print job of the print order from said image storage means to the printer when said determination means determines that the message ~~end command~~ is not received.

2. (Previously presented) The server apparatus according to claim 1, wherein, if the print data of the print job to be executed by the print request from the client cannot be stored in said image storage means, causing said order management means to manage the print order of the print job without storing the print data of the print job in said image storage means.

3. (Previously presented) The server apparatus according to claim 1, further comprising history storage means for, with each print job outputted by the printer, storing information indicative of a client that requested the print job and a device that transmitted print data to the printer.

4. (Currently amended) A print managing method for a server apparatus adapted to communicate with at least one client, each client including an image storage unit for storing print data of a print job, and a printer via a network, comprising:

an image storage step of storing print data of a print job, to be executed according to a print request from a client, in image storage means;

an order management step of managing a print order of the print job to be executed according to the print request from the client;

a transmission step of transmitting transmission permission information to the client based on the print order managed at said order management step, the transmission permission information indicating that the print data may be transmitted to the printer;

a determination step of determining whether a message, which indicates that the printing process of the print data has finished, ~~an end command in response to the transmission~~

~~permission information~~ is received from the client within a predetermined time in response to the transmission permission information; and

a control step of transmitting the print data of the print job of the print order from the image storage means to the printer when it is determined in said determination step that the message end command is not received.

5. (Previously presented) The print managing method according to claim 4, wherein, if the print data of the print job to be executed according to the print request from the client cannot be stored in the image storage means, managing the print order of the print job at said order management step without storing the print data of the print job in the image storage means.

6. (Previously presented) The print managing method according to claim 4, further comprising a history storage step of, which each print job outputted by the printer, storing information indicative of a client that requested the print job and a device that transmitted print data to the printer.

7. (Currently amended) A storage medium storing a program for implementing a print managing method for a server apparatus adapted to communicate with at least one client, each client including an image storage unit for storing print data of a print job, and a printer via a network, wherein the method comprises:

an image storage step of storing print data of a print job, to be executed according to a print request from the client, in image storage means;

an order management step of managing a print order of the print job to be executed according to the print request from the client;

a transmission step of transmitting transmission permission information to the client based on the print order managed at said order management step, the transmission permission information indicating that the print data may be transmitted to the printer;

a determination step of determining whether a message, which indicates that the printing process of the print data stored in the image storage unit has finished, an end command in response to the transmission permission information is received from the client within a predetermined time in response to the transmission permission information; and

a control step of transmitting the print data of the print job of the print order from the image storage means to the printer when it is determined in said determination step that the message end command is not received.

8. (Currently amended) An information processing apparatus as a client that communicates with a server apparatus, which manages a print order and has a spool unit for storing print data, and a printer via a network, comprising:

sending means for sending job information, which does not include print data, to the server apparatus so that the server apparatus manages a print order according to the job information;

image storage means for storing print data of a print job corresponding to the job information so that the information processing apparatus may directly transmit the print data to the printer without intervention of the server apparatus ~~after said sending means sends the job information~~;

selection means for causing a user to select one of a spool function of said image storage means and [[or]] a spool function of the server apparatus via a user interface, which is adapted to store the print data of the print job to be executed according to the print request to the server apparatus;

determination means for determining whether the spool function of said image storage means is selected or the spool function of the server apparatus is selected by said selection means;

control means for, if it is determined by said determination means to use the spool function of the server apparatus, transmitting the print data to the server apparatus, whereas, if it is determined by said determination means to use the spool function of said image storage means, controlling said image storage means to store the print data and controlling said sending means to send the job information;

receiving means for receiving transmission permission information from the server apparatus indicating that the print data may be transmitted to the printer when the print data is stored in said image storage means; and

transmission means for transmitting the print data to the printer when said receiving means receives the transmission permission information from the server apparatus.

9. (Previously presented) The information processing apparatus according to claim 8, further comprising notification means for notifying the server apparatus of the selected spool function.

10. (Previously presented) The information processing apparatus according to claim 8, wherein said selection means causes the user to make a selection by displaying a screen image of a user interface.

11. (Currently amended) A print managing method for an information processing apparatus as a client that communicates with a server apparatus, which manages a print order and which has a spool unit for storing print data, and a printer via a network, comprising:

a sending step of sending job information, which does not include print data, to the server apparatus so that the server apparatus manages a print order according to the job information;

an image storage step of storing in image storing means print data of a print job, corresponding to the job information so that the information processing apparatus directly transmits the print data to the printer without intervention of the server apparatus after said sending step sends the job information;

a selection step of causing a user to select one of a spool function of the image storage means and ~~[[or]]~~ a spool function of the server apparatus via a user interface, which is adapted to store the print data of the print job to be executed according to the print request to the server apparatus;

a determination step of determining whether the spool function of the image storage means is selected or the spool function of the server apparatus is selected in said selection step; and

a control step of, if it is determined in said determination step that the spool function of the server apparatus is to be used, transmitting the print data to the server apparatus,

such that the server apparatus directly transmits the print data to the printer, whereas, if it is determined in said determination step that the spool function of the image storage means is to be used, controlling the image storage means to store the print data and controlling said sending step to send the job information;

a reception step of receiving transmission permission information from the server apparatus indicating that the print data may be transmitted to the printer when the print data is stored in said image storage means; and

a transmission step of transmitting the print data to the printer when the transmission permission information is received from the server apparatus at said reception step.

12. (Previously presented) The print managing method according to claim 11, further comprising a notification step of notifying the server apparatus of the selected spool function.

13. (Previously presented) The print managing method according to claim 11, wherein, at said selection step, a screen image of a user interface is displayed to cause the user to make a selection.

14. (Currently amended) A storage medium storing a program for implementing a print managing method for an information processing apparatus as a client that communicates with a server apparatus, which manages a print order and has a spool unit for storing print data, and a printer via a network, wherein the method comprises:

a sending step of sending job information, which does not include print data, to the server apparatus so that the server apparatus manages a print order according to the job information;

an image storage step of storing in image storage means print data of a print job corresponding to the job information so that the information processing apparatus directly transmits the print data to the printer without intervention of the server apparatus after said sending step sends the job information;

a selection step of causing a user to select one of a spool function of the image storage means and ~~[[or]]~~ a spool function of the server apparatus via a user interface, which is adapted to store the print data of the print job to be executed according to the print request to the server apparatus;

a determination step of determining whether the spool function of the image storage means is selected or the spool function of the server apparatus is selected in said selection step; and

a control step of, if it is determined in said determination step that the spool function of the server apparatus is to be used, transmitting the print data to the server apparatus, such that the server apparatus directly transmits the print data to the printer, whereas, if it is determined in said determination step that the spool function of the image storage means is to be used, controlling the image storage means to store the print data and controlling said sending step to send the job information;

a reception step of receiving transmission permission information from the server apparatus indicating that the print data may be transmitted to the printer when the print data is stored in said image storage means; and



a transmission step of transmitting the print data to the printer when the transmission permission information is received from the server apparatus at said reception step.

15. (Currently amended) An information processing apparatus as a client that communicates with a server apparatus, which manages a print order and has a spool unit for storing print data, and a printer via a network, comprising:

image storage means for storing print data of a print job to be executed according to a print request so that the information processing apparatus directly transmits the print data to the printer without intervention of the server apparatus;

determination means for determining to use one of a spool function of said image storage means and a spool function of the server apparatus based on a condition of said image storage means, the spool function being adapted to store the print data of the print job to be executed according to the print request to the server apparatus;

control means for, if said determination means determines to use the spool function of the server apparatus, transmitting the print data to the server apparatus, whereas, if said determination means determines to use the spool function of said image storage means, controlling said image storage means to store the print data;

receiving means for receiving transmission permission information from the server apparatus indicating the print data may be transmitted to the printer when the print data is stored in said image storage means; and

transmission means for transmitting the print data to the printer when said receiving means receives the transmission permission information from the server apparatus.

16. (Previously presented) The information processing apparatus according to claim 15, further comprising notification means for notifying the server apparatus of the determined spool function.

17. (Previously presented) The information processing apparatus according to claim 15, wherein said determination means makes a determination according to whether or not a remaining capacity of said image storage means is equal to or less than a predetermined amount of capacity.

18. (Currently amended) A print managing method for an information processing apparatus as a client that communicates with a server apparatus, which manages a print order and has a spool unit for storing print data, and a printer via a network, comprising:

an image storage step of storing print data of a print job, to be executed according to a print request so that the information processing apparatus directly transmits the print data to the printer without intervention of the server apparatus, in image storage means;

a determination step of determining to use one of a spool function of the image storage means and a spool function of the server apparatus based on a condition of said image storage means, the spool function being adapted to store the print data of the print job to be executed according to the print request to the server apparatus;

a control step of, if it is determined at said determination step that the spool function of the server apparatus is to be used, transmitting the print data to the server apparatus such that the server apparatus directly transmits the print data to the printer, whereas, if it is

determined at said determination step that the spool function of the image storage means is to be used, controlling the image storage means to store the print data;

a reception step of receiving transmission permission information from the server apparatus indicating that the print data may be transmitted to the printer when the print data is stored in said image storage means; and

a transmission step of transmitting the print data to the printer when the transmission permission information is received from the server apparatus at said reception step.

19. (Previously presented) The print managing method according to claim 18, further comprising a notification step of notifying the server apparatus of the determined spool function.

20. (Previously presented) The print managing method according to claim 18, wherein, at said determination step, a determination is made according to whether or not a remaining capacity of the image storage means is equal to or less than a predetermined amount of capacity.

21. (Currently amended) A storage medium storing a program for implementing a print managing method for an information processing apparatus as a client that communicates with a server apparatus, which manages a print order and has a spool unit for storing print data, and a printer via a network, wherein the method comprises:

an image storage step of storing print data of a print job, to be executed according to a print request, in image storage means, so that the information processing apparatus directly transmits the print data to the printer without intervention of the server apparatus;

a determination step of determining to use one of a spool function of the image storage means and a spool function of the server apparatus based on a condition of said image storage means, the spool function being adapted to store the print data of the print job to be executed according to the print request to the server apparatus;

a control step of, if it is determined at said determination step that the spool function of the server apparatus is to be used, transmitting the print data to the server apparatus such that the server apparatus directly transmits the print data to the printer, whereas, if it is determined at said determination step that the spool function of the image storage means is to be used, controlling the image storage means to store the print data;

a reception step of receiving transmission permission information from the server apparatus indicating that the print data may be transmitted to the printer when the print data is stored in said image storage means; and

a transmission step of transmitting the print data to the printer when the transmission permission information is received from the server apparatus at said reception step.

22. (Currently amended) An information processing apparatus as a client that communicates with a server apparatus, which manages a print order and has a spool unit for storing a print job and intermediate data of the print job, and a printer via a network, comprising:

image storage means for storing the print job and the intermediate data of the print job to be executed according to a print request such that the information processing apparatus directly transmits the print job to the printer without intervention of the server apparatus;

list acquisition means for acquiring a list of print jobs managed by the server apparatus;

job designation means for designating a print job to be previewed based on the list of print jobs acquired by said list acquisition means;

determination means for determining whether the intermediate data of the print job designated by said job designation means is stored in said image storage means or in the spool unit of the server apparatus;

intermediate data acquisition means for, if it is determined by said determination means that the intermediate data of the print job designated by said job designation means is stored in said image storage means, reading the intermediate data from said image storage means, whereas, if it is determined by said determination means that the intermediate data is stored in the server apparatus, downloading the intermediate data from the server apparatus; and

control means for displaying a preview image based on the intermediate data acquired by said intermediate data acquisition means.

23. (Previously presented) The information processing apparatus according to claim 22, wherein said job designation means causes a user to make a designation by displaying a screen image of a user interface.

24. (Previously presented) The information processing apparatus according to claim 22, wherein the image data is an EMF file comprising intermediate data.

25. (Previously presented) The information processing apparatus according to claim 24, wherein said control means displays the preview image by controlling a display function of an Operating System to execute the acquired EMF file.

26. (Currently amended) A print managing method for an information processing apparatus as a client that communicates with a server apparatus, which manages a print order and has a spool unit for storing a print job and intermediate data of the print job, and a printer via a network, comprising:

an image storage step of storing the print job and the intermediate data of the print job, to be executed according to a print request, in image storage means, such that the information processing apparatus directly transmits the print job to the printer without intervention of the server apparatus;

a list acquisition step of acquiring a list of print jobs managed by the server apparatus;

a job designation step of designating a print job to be previewed based on the list of print jobs acquired at said list acquisition step;

a determination step of determining whether the intermediate data of the print job designated at said job designation step is stored in the image storage means or in the spool unit of the server apparatus;

an intermediate data acquisition step of, if it is determined at said determination step that the data of the print job designated at said job designation step is stored in the image storage means, reading the intermediate data from the image storage means, whereas, if it is determined at said determination step that the intermediate data is stored in the server apparatus, downloading the intermediate data from the server apparatus; and

a control step of displaying a preview image based on the intermediate data acquired at said intermediate data acquisition step.

27. (Previously presented) The print managing method according to claim 26, wherein, at said job designation step, a screen image of a user interface is displayed to cause a user to make designation.

28. (Previously presented) The print managing method according to claim 26, wherein the image data is an EMF file comprising intermediate data.

29. (Previously presented) The print managing method according to claim 28, wherein, at said control step, the preview image is displayed by controlling a display function of an Operating System to execute the acquired EMF file.

30. (Currently amended) A storage medium storing a program for implementing a print managing method for an information processing apparatus as a client that communicates with a server apparatus, which manages a print order and has a spool unit for storing a print job

and intermediate data of the print job, and a printer via a network, wherein the method comprises:

an image storage step of storing the print job and the intermediate data of the print job, to be executed according to a print request, in image storage means, such that the information processing apparatus directly transmits the print job to the printer without intervention of the server apparatus;

a list acquisition step of acquiring a list of print jobs managed by the server apparatus;

a job designation step of designating a print job to be previewed based on the list of print jobs acquired at said list acquisition step;

a determination step of determining whether the intermediate data of the print job designated at said job designation step is stored in the image storage means or in the spool unit of the server apparatus;

an intermediate data acquisition step of, if it is determined at said determination step that the intermediate data of the print job designated at said job designation step is stored in the image storage means, reading the intermediate data from the image storage means, whereas, if it is determined at said determination step that the intermediate data is stored in the server apparatus, downloading the intermediate data from the server apparatus; and

a control step of displaying a preview image based on the intermediate data acquired at said intermediate data acquisition step.



31. (New) The server apparatus according to Claim 1, wherein:

the transmission permission information is such that the client directly transmits the print data to the printer without intervention of the server apparatus;

the message indicates that the printing process of the print data stored in the image storage unit of the client has finished; and

the control means transmits the print data of the print job of the print order from said image storage means to the printer instead of from the image storage unit of the client when said determination means determines that the message is not received.

32. (New) The print managing method according to Claim 4, wherein:

the transmission permission information is such that the client directly transmits the print data to the printer without intervention of the server apparatus;

the message indicates that the printing process of the print data stored in the image storage unit of the client has finished; and

the control step transmits the print data of the print job of the print order from said image storage means to the printer instead of from the image storage unit of the client when said determination means determines that the message is not received.

33. (New) The storage medium according to Claim 7, wherein:

the transmission permission information is such that the client directly transmits the print data to the printer without intervention of the server apparatus;

the message indicates that the printing process of the print data stored in the image storage unit of the client has finished; and

the control step transmits the print data of the print job of the print order from said image storage means to the printer instead of from the client when said determination means determines that the message is not received.

34. (New) The information processing apparatus according to Claim 8, wherein transmitting the print data to the server apparatus is done such that the server apparatus directly transmits the print data to the printer.

35. (New) The print managing method according to Claim 11, wherein transmitting the print data to the server apparatus is done such that the server apparatus directly transmits the print data to the printer.

36. (New) The storage medium according to Claim 14, wherein transmitting the print data to the server apparatus is done such that the server apparatus directly transmits the print data to the printer.

37. (New) The information processing apparatus according to Claim 15, wherein transmitting the print data to the server apparatus is done such that the server apparatus directly transmits the print data to the printer.

38. (New) The print managing method according to Claim 18, wherein transmitting the print data to the server apparatus is done such that the server apparatus directly transmits the print data to the printer.

39. (New) The storage medium according to Claim 21, wherein transmitting the print data to the server apparatus is done such that the server apparatus directly transmits the print data to the printer.

40. (New) The data processing apparatus according to Claim 22, wherein the intermediate data of the print job is stored in the spool unit of the server apparatus such that the server apparatus directly transmits the print job to the printer.

41. (New) The print managing method according to Claim 26, wherein the intermediate data of the print job is stored in the spool unit of the server apparatus such that the server apparatus directly transmits the print job to the printer.

42. (New) The storage medium according to Claim 30, wherein the intermediate data of the print job is stored in the spool unit of the server apparatus such that the server apparatus directly transmits the print job to the printer.